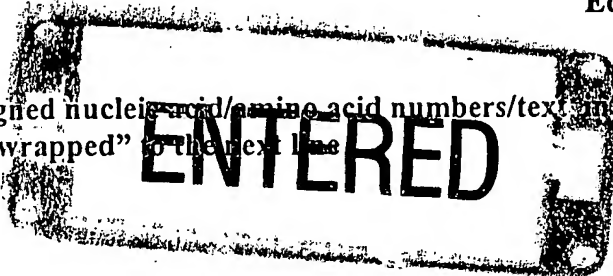# CRF Errors Edited by the STIC Systems Branch

Serial Number: __10/506,925__   CRF Edit Date: __9/17/04__
                                       Edited by: __ST__

____ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

ENTERED

____ Corrected the SEQ ID NO. Sequence numbers edited were:

_____

____ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

_____

__✓__ Deleted: __/__ invalid beginning/end-of-file text ; ____ page numbers

____ Inserted mandatory headings/numeric identifiers, specifically:

_____

____ Moved responses to same line as heading/numeric identifier, specifically:

_____

____ Other:

_____
_____
_____

Revised 09/09/2003

PCT

RAW SEQUENCE LISTING   DATE: 09/17/2004
PATENT APPLICATION: US/10/506,925   TIME: 15:30:17

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\09172004\J506925.raw

```
 1 <110> APPLICANT: Neurogenex Co., Ltd.
 3 <120> TITLE OF INVENTION: ENHANCED INSERTED YELLOW FLUORESCENCE PROTEIN AND ITS
 4       APPLICATION
 7 <130> FILE REFERENCE: PN0023095.00
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/506,925
C--> 9 <141> CURRENT FILING DATE: 2004-09-07
 9 <150> PRIOR APPLICATION NUMBER: KR10-2002-0012409
10 <151> PRIOR FILING DATE: 2002-03-08
12 <150> PRIOR APPLICATION NUMBER: KR10-2002-0015217
13 <151> PRIOR FILING DATE: 2002-03-21
15 <150> PRIOR APPLICATION NUMBER: KR10-2002-0015219
16 <151> PRIOR FILING DATE: 2002-03-21
18 <160> NUMBER OF SEQ ID NOS: 16
20 <170> SOFTWARE: KopatentIn 1.71
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 738
24 <212> TYPE: PRT
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: y-citrine of fluorescence protein
31 <400> SEQUENCE: 1
32 Ala Thr Gly Gly Thr Gly Ala Gly Cys Ala Ala Gly Gly Gly Cys Gly
33  1               5                   10                  15
35 Ala Gly Gly Ala Gly Cys Thr Gly Thr Thr Cys Ala Cys Cys Gly Gly
36              20                  25                  30
38 Gly Gly Thr Gly Gly Thr Gly Cys Cys Cys Ala Thr Cys Cys Thr Gly
39          35                  40                  45
41 Gly Thr Cys Gly Ala Gly Cys Thr Gly Gly Ala Cys Gly Gly Cys Gly
42      50                  55                  60
44 Ala Cys Gly Thr Ala Ala Ala Cys Gly Gly Cys Cys Ala Cys Ala Ala
45  65                  70                  75                  80
47 Gly Thr Thr Cys Ala Gly Cys Gly Thr Gly Thr Cys Cys Gly Gly Cys
48              85                  90                  95
50 Gly Ala Gly Gly Gly Cys Gly Ala Gly Gly Gly Cys Gly Ala Thr Gly
51          100                 105                 110
53 Cys Cys Ala Cys Cys Thr Ala Cys Gly Gly Cys Ala Ala Gly Cys Thr
54          115                 120                 125
56 Gly Ala Cys Cys Cys Thr Gly Ala Ala Gly Thr Thr Cys Ala Thr Cys
57      130                 135                 140
59 Thr Gly Cys Ala Cys Cys Ala Cys Cys Gly Gly Cys Ala Ala Gly Cys
60 145                 150                 155                 160
62 Thr Gly Cys Cys Cys Gly Thr Gly Cys Cys Cys Thr Gly Gly Cys Cys
63              165                 170                 175
```

```
 65 Cys Ala Cys Cys Cys Thr Cys Gly Thr Gly Ala Cys Thr Ala Cys Cys
 66             180             185             190
 68 Thr Thr Cys Gly Gly Cys Thr Ala Cys Gly Gly Cys Cys Thr Gly Ala
 69             195             200             205
 71 Thr Gly Thr Gly Cys Thr Thr Cys Gly Cys Cys Cys Gly Cys Thr Ala
 72     210             215             220
 74 Cys Cys Cys Cys Gly Ala Cys Cys Ala Cys Ala Thr Gly Ala Ala Gly
 75 225             230             235             240
 77 Cys Ala Gly Cys Ala Cys Gly Ala Cys Thr Thr Cys Thr Thr Cys Ala
 78             245             250             255
 80 Ala Gly Thr Cys Cys Gly Cys Cys Ala Thr Gly Cys Cys Cys Gly Ala
 81             260             265             270
 83 Ala Gly Gly Cys Thr Ala Cys Gly Thr Cys Cys Ala Gly Gly Ala Gly
 84         275             280             285
 86 Cys Gly Cys Ala Cys Cys Ala Thr Cys Thr Thr Cys Thr Thr Cys Ala
 87     290             295             300
 89 Ala Gly Gly Ala Cys Gly Ala Cys Gly Gly Cys Ala Ala Cys Thr Ala
 90 305             310             315             320
 92 Cys Ala Ala Gly Ala Cys Cys Cys Gly Cys Gly Cys Cys Gly Ala Gly
 93             325             330             335
 95 Gly Thr Gly Ala Ala Gly Thr Thr Cys Gly Ala Gly Gly Gly Cys Gly
 96             340             345             350
 98 Ala Cys Ala Cys Cys Cys Thr Gly Gly Thr Gly Ala Ala Cys Cys Gly
 99         355             360             365
101 Cys Ala Thr Cys Gly Ala Gly Cys Thr Gly Ala Ala Gly Gly Gly Cys
102     370             375             380
104 Ala Thr Cys Gly Ala Cys Thr Thr Cys Ala Ala Gly Gly Ala Gly Gly
105 385             390             395             400
107 Ala Cys Gly Gly Cys Ala Ala Cys Ala Thr Cys Cys Thr Gly Gly Gly
108             405             410             415
110 Gly Cys Ala Cys Ala Ala Gly Cys Thr Gly Gly Ala Gly Thr Ala Cys
111             420             425             430
113 Ala Ala Cys Thr Ala Cys Gly Gly Thr Gly Gly Ala Thr Cys Cys Gly
114         435             440             445
116 Gly Thr Gly Cys Thr Ala Gly Cys Ala Ala Cys Ala Gly Cys Cys Ala
117     450             455             460
119 Cys Ala Ala Cys Gly Thr Cys Thr Ala Thr Ala Thr Cys Ala Thr Gly
120 465             470             475             480
122 Gly Cys Cys Gly Ala Cys Ala Ala Gly Cys Ala Gly Ala Ala Gly Ala
123             485             490             495
125 Ala Cys Gly Gly Cys Ala Thr Cys Ala Ala Gly Gly Thr Gly Ala Ala
126             500             505             510
128 Cys Thr Thr Cys Ala Ala Gly Ala Thr Cys Cys Gly Cys Cys Ala Cys
129         515             520             525
131 Ala Ala Cys Ala Thr Cys Gly Ala Gly Gly Ala Cys Gly Gly Cys Ala
132     530             535             540
134 Gly Cys Gly Thr Gly Cys Ala Gly Cys Thr Cys Gly Cys Cys Gly Ala
135 545             550             555             560
137 Cys Cys Ala Cys Thr Ala Cys Cys Ala Gly Cys Ala Gly Ala Ala Cys
```

```
138                565                570                575
140 Ala Cys Cys Cys Cys Cys Ala Thr Cys Gly Gly Cys Gly Ala Cys Gly
141              580                585                590
143 Gly Cys Cys Cys Cys Gly Thr Gly Cys Thr Gly Cys Thr Gly Cys Cys
144          595                600                605
146 Cys Gly Ala Cys Ala Ala Cys Cys Ala Cys Thr Ala Cys Cys Thr Gly
147      610                615                620
149 Ala Gly Cys Thr Ala Cys Cys Ala Gly Thr Cys Cys Gly Cys Cys Cys
150 625                630                635                640
152 Thr Gly Ala Gly Cys Ala Ala Ala Gly Ala Cys Cys Cys Cys Ala Ala
153              645                650                655
155 Cys Gly Ala Gly Ala Ala Gly Cys Gly Cys Gly Ala Thr Cys Ala Cys
156              660                665                670
158 Ala Thr Gly Gly Thr Cys Cys Thr Gly Cys Thr Gly Gly Ala Gly Thr
159          675                680                685
161 Thr Cys Gly Thr Gly Ala Cys Cys Gly Cys Cys Gly Cys Cys Gly Gly
162     690                695                700
164 Gly Ala Thr Cys Ala Cys Thr Cys Thr Cys Gly Gly Cys Ala Thr Gly
165 705                710                715                720
167 Gly Ala Cys Gly Ala Gly Cys Thr Gly Thr Ala Cys Ala Ala Gly Thr
168              725                730                735
170 Ala Ala
174 <210> SEQ ID NO: 2
175 <211> LENGTH: 738
176 <212> TYPE: PRT
177 <213> ORGANISM: Artificial Sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: Peridot of fluorescence protein
183 <400> SEQUENCE: 2
184 Ala Thr Gly Gly Thr Gly Ala Gly Cys Ala Ala Gly Gly Gly Cys Gly
185   1            5                10                15
187 Ala Gly Gly Ala Gly Cys Thr Gly Thr Thr Cys Ala Cys Cys Gly Gly
188          20                25                30
190 Gly Gly Thr Gly Gly Thr Gly Cys Cys Cys Ala Thr Cys Cys Thr Gly
191          35                40                45
193 Gly Thr Cys Gly Ala Gly Cys Thr Gly Gly Ala Cys Gly Gly Cys Gly
194      50                55                60
196 Ala Cys Gly Thr Ala Ala Ala Cys Gly Gly Cys Cys Ala Cys Ala Ala
197 65                70                75                80
199 Gly Thr Thr Cys Ala Gly Cys Gly Thr Gly Thr Cys Cys Gly Gly Cys
200              85                90                95
202 Gly Ala Gly Gly Gly Cys Gly Ala Gly Gly Gly Cys Gly Ala Thr Gly
203          100                105                110
205 Cys Cys Ala Cys Cys Thr Ala Cys Gly Gly Cys Ala Ala Gly Cys Thr
206          115                120                125
208 Gly Ala Cys Cys Cys Thr Gly Ala Ala Gly Thr Thr Cys Ala Thr Cys
209      130                135                140
211 Thr Gly Cys Ala Cys Cys Ala Cys Cys Gly Gly Cys Ala Ala Gly Cys
212 145                150                155                160
```

```
214 Thr Gly Cys Cys Cys Gly Thr Gly Cys Cys Cys Thr Gly Gly Cys Cys
215             165             170             175
217 Cys Ala Cys Cys Cys Thr Cys Gly Thr Gly Ala Cys Thr Ala Cys Cys
218             180             185             190
220 Thr Thr Cys Gly Gly Cys Thr Ala Cys Gly Gly Cys Cys Thr Gly Ala
221     195             200             205
223 Thr Gly Thr Gly Cys Thr Thr Cys Gly Cys Cys Cys Gly Cys Thr Ala
224     210             215             220
226 Cys Cys Cys Cys Gly Ala Cys Cys Ala Cys Ala Thr Gly Ala Ala Gly
227 225             230             235             240
229 Cys Ala Gly Cys Ala Cys Gly Ala Cys Thr Thr Cys Thr Thr Cys Ala
230             245             250             255
232 Ala Gly Thr Cys Cys Gly Cys Cys Ala Thr Gly Cys Cys Cys Gly Ala
233             260             265             270
235 Ala Gly Gly Cys Thr Ala Cys Gly Thr Cys Cys Ala Gly Gly Ala Gly
236         275             280             285
238 Cys Gly Cys Ala Cys Cys Ala Thr Cys Thr Thr Cys Thr Thr Cys Ala
239         290             295             300
241 Ala Gly Gly Ala Cys Gly Ala Cys Gly Gly Cys Ala Ala Cys Thr Ala
242 305             310             315             320
244 Cys Ala Ala Gly Ala Cys Cys Cys Gly Cys Gly Cys Cys Gly Ala Gly
245             325             330             335
247 Gly Thr Gly Ala Ala Gly Thr Thr Cys Gly Ala Gly Gly Gly Cys Gly
248             340             345             350
250 Ala Cys Ala Cys Cys Cys Thr Gly Gly Thr Gly Ala Ala Cys Cys Gly
251         355         ,         360             365
253 Cys Ala Thr Cys Gly Ala Gly Cys Thr Gly Ala Ala Gly Gly Gly Cys
254     370             375             380
256 Ala Thr Cys Gly Ala Cys Thr Thr Cys Ala Ala Gly Gly Ala Gly Gly
257 385             390             395             400
259 Ala Cys Gly Gly Cys Ala Ala Cys Ala Thr Cys Cys Thr Gly Gly Gly
260             405             410             415
262 Gly Cys Ala Cys Ala Ala Gly Cys Thr Gly Gly Ala Gly Thr Ala Cys
263             420             425             430
265 Ala Ala Cys Thr Ala Cys Gly Gly Thr Gly Gly Ala Thr Cys Cys Gly
266         435             440             445
268 Gly Thr Gly Cys Thr Ala Gly Cys Ala Ala Cys Ala Gly Cys Cys Ala
269     450             455             460
271 Cys Ala Ala Cys Gly Thr Cys Thr Ala Thr Ala Thr Cys Ala Thr Gly
272 465             470             475             480
274 Gly Cys Cys Gly Ala Cys Ala Ala Gly Cys Ala Gly Ala Ala Gly Ala
275             485             490             495
277 Ala Cys Gly Gly Cys Ala Thr Cys Ala Ala Gly Gly Thr Gly Ala Ala
278         500             505             510
280 Cys Thr Thr Cys Ala Ala Gly Ala Thr Cys Cys Gly Cys Cys Ala Cys
281         515             520             525
283 Ala Ala Cys Ala Thr Cys Gly Ala Gly Gly Ala Cys Gly Gly Cys Ala
284     530             535             540
286 Gly Cys Gly Thr Gly Cys Ala Gly Cys Thr Cys Gly Cys Cys Gly Ala
```

RAW SEQUENCE LISTING   DATE: 09/17/2004
PATENT APPLICATION: US/10/506,925   TIME: 15:30:17

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\09172004\J506925.raw

```
287 545                  550                  555                  560
289 Cys Cys Ala Cys Thr Ala Cys Cys Ala Gly Cys Ala Gly Ala Ala Cys
290                  565                  570                  575
292 Ala Cys Cys Cys Cys Cys Ala Thr Cys Gly Gly Cys Gly Ala Cys Gly
293              580                  585                  590
295 Gly Cys Cys Thr Cys Gly Thr Gly Cys Thr Gly Cys Thr Gly Cys Cys
296          595                  600                  605
298 Cys Gly Ala Cys Ala Ala Cys Cys Ala Cys Thr Ala Cys Cys Thr Gly
299      610                  615                  620
301 Ala Gly Cys Thr Ala Cys Cys Ala Gly Thr Cys Cys Gly Cys Cys Cys
302 625                  630                  635                  640
304 Thr Gly Ala Gly Cys Ala Ala Ala Gly Ala Cys Cys Cys Cys Ala Ala
305                  645                  650                  655
307 Cys Gly Ala Gly Ala Ala Gly Cys Gly Cys Gly Ala Thr Cys Ala Cys
308              660                  665                  670
310 Ala Thr Gly Gly Thr Cys Cys Thr Gly Cys Thr Gly Gly Ala Gly Thr
311          675                  680                  685
313 Thr Cys Gly Thr Gly Ala Cys Cys Gly Cys Cys Gly Cys Cys Gly Gly
314      690                  695                  700
316 Gly Ala Thr Cys Ala Cys Thr Ala Thr Cys Gly Gly Cys Ala Thr Gly
317 705                  710                  715                  720
319 Gly Ala Cys Gly Ala Gly Cys Thr Gly Thr Ala Cys Ala Ala Gly Thr
320                  725                  730                  735
322 Ala Ala
326 <210> SEQ ID NO: 3
327 <211> LENGTH: 45
328 <212> TYPE: DNA
329 <213> ORGANISM: Artificial Sequence
331 <220> FEATURE:
332 <223> OTHER INFORMATION: BamHi/5AB-F primer
335 <400> SEQUENCE: 3
336 gggggatcc gaggctggtg aggacgttgt ctgctgctcg atgtc                    45
339 <210> SEQ ID NO: 4
340 <211> LENGTH: 45
341 <212> TYPE: DNA
342 <213> ORGANISM: Artificial Sequence
344 <220> FEATURE:
345 <223> OTHER INFORMATION: Nhe1/5AB-R primer
348 <400> SEQUENCE: 4
349 ggggctagc acctgtccat gtgtaggaca tcgagcagca gacaa                    45
352 <210> SEQ ID NO: 5
353 <211> LENGTH: 30
354 <212> TYPE: DNA
355 <213> ORGANISM: Artificial Sequence
357 <220> FEATURE:
358 <223> OTHER INFORMATION: BamHI/CaM F primer
361 <400> SEQUENCE: 5
362 gggggatcca tgcatgacca actgacagaa                                    30
365 <210> SEQ ID NO: 6
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VERIFICATION SUMMARY   DATE: 09/17/2004
PATENT APPLICATION: US/10/506,925   TIME: 15:30:18

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF4\09172004\J506925.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date